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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/290,579	04/13/1999	HIDEKI ASADA	OSP-8028	1042

466 7590 12/04/2002

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EXAMINER

ALPHONSE, FRITZ

ART UNIT PAPER NUMBER

2675

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/290,579

Applicant(s)

ASADA

Examiner

Fritz Alphonse

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 5, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Apr 13, 1999 is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3, 5, 8 6) ☐ Other:

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DETAILED ACTION

Response to Amendment

This is in regard to election filed on 8/5/02 in which figure one (corresponding to claims 1-4) has been elected by Applicant. This election is final.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiraki (U.S. Pat. No. 5,844,538).

As to claim 1, Shiraki (fig. 29) in the prior art shows an active matrix-type liquid crystal display device in which pixel electrodes are driven by MOS type transistor circuits (note the prior art TFTs with MOS type, see col. 1, lines 62-67) respectively disposed in the vicinity of cross-over points of a plurality of scanning lines and a plurality of signal lines, said MOS type transistor circuit is comprised of: a MOS type transistor (TR) in which a gate electrode is connected to a scanning line (i.e., scan signal line) and one of a source electrode and a drain electrode is connected to said signal line (i.e., data signal line). Shiraki (fig. 29) shows a voltage holding capacitor (Ch); and a MOS type analog amplifier circuit (109) in which an input electrode is connected to another one of the source

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electrode and the drain electrode of said MOS type transistor, and an output electrode is connected to a pixel electrode (Cp).

As to claim 2, Shiraki teaches about an active matrix-type liquid crystal display device, wherein said MOS type transistor circuits are formed by thin film transistors (note: the prior art circuits are TFTs; see col. 1, line 65).

As to claim 4, method claim 4 corresponds to apparatus claim 1, therefore, it is analyzed as previously discussed in claim 1 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki (U.S. Pat. No. 5,844,538) in view of Takemura (U.S. Pat. No. 5,828,429).

As to claim 3, Shiraki does not teach about a liquid crystal display device including a liquid crystal material selected from the group consisting of a nematic liquid crystal or a ferroelectric liquid crystal, an antiferroelectric liquid crystal, a thresholdless antiferroelectric liquid crystal, a distorted helix ferroelectric liquid crystal, a twisted ferroelectric liquid crystal, and a monostable. However, this limitation is disclosed by Takemura (fig. 2; col. 10, lines 54 through col. 11 line 10).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to improve upon the electro-optical device as disclosed by Takena. Doing so would provide a method of driving an electro-optical device suitable for digital grading with a high yield.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hamada et al. (U.S. Pat. No. 5,194,974) discloses a non-flicker liquid crystal display with capacitive charge storage.

Yamaguchi et al. (U.S. Pat. No. 5,627,557) discloses a display apparatus of an active matrix driving system.

Koyama et al. (U.S. Pat. No. 5,903,249) discloses a method for driving active matrix display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached on (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA.,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone number
is (703) 306-0377.


F. Alphonse

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November 21, 2002


STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600